

EXPENDITURE PLAN FOR GREAT LAKES SALMON AND TROUT STAMP REVENUES, 1983-88

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Administrative
Report No. 18

Fish Management
Bureau
Department of
Natural Resources
Madison, Wisconsin
October 1983



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INTRODUCTION

Since 1982, licensed resident and nonresident anglers have been required to purchase a Great Lakes Salmon and Trout Stamp for \$3.25 in order to fish salmon and trout in the Great Lakes outlying waters of Wisconsin. State statute 29.15(5) states that the Department of Natural Resources "shall expend the receipts from the sale of Great Lakes Trout and Salmon Stamps to supplement and enhance the existing trout and salmon rearing and stocking program for outlying waters and to administer this section."

In 1982, the Department established that expenditures of revenue generated by Salmon and Trout Stamp sales are: (1) species limited to salmon and trout only, (2) geographically limited to the Wisconsin waters of Lakes Michigan and Superior and their tributaries, and (3) program limited to the rearing and stocking program. Projects funded by stamp monies must meet these three requirements or be related to the administration of these monies (Appendix I).

This document describes the expenditure plan of Great Lakes Salmon and Trout Stamp revenues for fiscal years 1983-88. Detail concerning projects, estimated costs, and predicted stamp revenues is given.

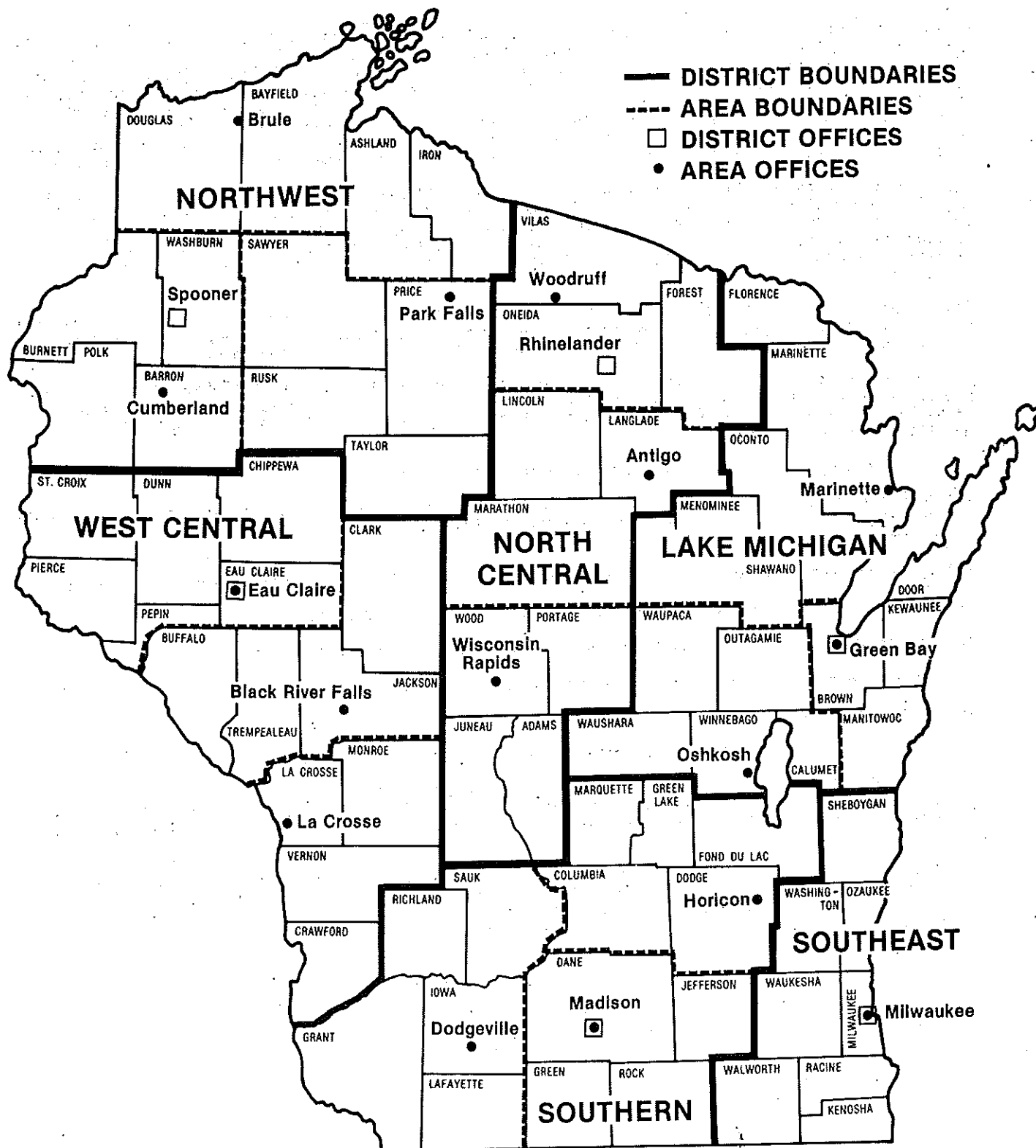
METHODS

Expenditures were tabulated by category, fiscal year, and district (Fig. 1). Projects were categorized as either facility developments or stocking program operations (activities). Fiscal years begin on July 1 of the preceding calendar year and extend through the following June 30. For example, fiscal year 1983 begins on July 1, 1982 and ends June 30, 1983.

Two inflation assumptions were used to estimate project costs for 1984-88. Costs for supplies and travel were increased each year after 1983 by 10%, and labor costs were inflated by a 7% rate. At the time this plan was developed, a 7% pay plan and 10% supplies and services inflation rate were recommended by the Department of Administration. A change from these assumptions to lower rates will allow the Department to start some projects earlier than scheduled and add additional projects in later years.

Expected Salmon and Trout Stamp revenues were estimated from reported 1982 revenues and anticipated growth in stamp sales from 1982-88. County clerks reported revenues of \$654,300 (218,100 stamps) to the Department on December 31, 1982. These revenues probably included sales through October. Revenues collected in November and December were estimated as \$50,000 (approximately 15,000 stamps). Total stamp revenue for 1982 was thus estimated as \$700,000. Stamp sales from 1984-88 were increased at a 1.5% rate. This rate of increase is the same as that historically observed in fishing license sales. Projected stamp revenues do not reflect interest income earned on balances carried from one year to the next.

FIGURE 1. District boundaries of the Wisconsin Department of Natural Resources.



CRITERIA FOR PROJECT SELECTION

All projects selected for salmon stamp funding had to meet Department guidelines for revenue expenditure from this account (see Appendix I). Each project selected had to pertain to salmonids, the Great Lakes, and the stocking program. Salmonids include Pacific salmon (*Oncorhynchus* sp.), trout (*Salmon* sp.), and chars (*Salvelinus* sp.). The Great Lakes watershed includes the Wisconsin waters of Lakes Michigan and Superior, and tributaries accessible to Great Lakes salmon and trout. The stocking program is defined as including physical facilities and activities. The physical facilities of the stocking program are the equipment, buildings, and land required to support stocking program activities. Activities within the program are categorized as being either propagation, evaluation, or experimental. Projects that met the preceding criteria were then ranked for expenditure importance.

Facility development projects were ranked according to development project criteria established by the Legislative Fiscal Bureau (Table I). In addition, development projects were selected for inclusion based on their contribution to the achievement of the objectives in the Strategic Plan and legal obligations. Accessibility to stocking sites weighed heavily in selecting hatchery development projects. Projects in southern Wisconsin within 1-hour access of 250,000 or more people were emphasized.

The criteria used to rank stocking program operations projects were the same as those used to rank fish management projects statewide. These criteria were established to identify those projects that would contribute to the accomplishment of the objectives in the Strategic Fish Management Plan.

Each of the projects was reviewed, critiqued, evaluated, and then ranked against other projects. This process ensured that each project was reviewed and discussed by area, district, and central office personnel before being considered for funding. Project review consisted of asking eight basic questions about each project.

- (1) Does the project address the objectives in the Strategic Plan?
- (2) Does the project address objectives that should be in future versions of the Strategic Plan? (Does the project focus on a key threat or opportunity that has become apparent since the plan was written?)
- (3) Is the project mandated by law, administrative code or policy, or Natural Resource Board Initiative?
- (4) How important is the objective or problem that the project addresses?
- (5) Are the manpower and cost estimates reasonable for what the project proposes?
- (6) How do the costs and benefits of the project compare to other projects?
- (7) Have we already met the objective?
- (8) Do we still have sufficient uncommitted labor to complete the project?

The Strategic Plan and its objectives, problems, and strategies served as the focal point for questions 1 and 4. In question 2, managers were given the opportunity to justify projects which did not address objectives in the current plan, but did identify new opportunities or threats that have surfaced since the plan was written.

Questions 5 and 6 reviewed project costs and manpower requirements to see if they were reasonable and then compared project benefits. The guidelines used for evaluating projects and their benefits ranked projects within four categories. These criteria served as guidelines only; projects were placed in higher or lower categories based on their costs and benefits.

Questions 7 and 8 regulated the number of projects proposed for funding. The projects that are proposed for funding in 1983-88 will fully utilize our present manpower complement.

Stocking program operations projects were ranked into four categories: (a) critical, (b) important, (c) moderately important, and (d) discretionary projects.

Table 1. Criteria used for ranking stocking facility development projects (established by Legislative Fiscal Bureau.

Category	Priority
Necessary for safety.	A
Required by law.	B
Necessary to maintain eligibility for federal funding.	C
Provides a net cost savings (in state funds) or greater operating efficiencies within a 10-year period.	D
Meets employee space overcrowding problem.	E
Preventive action necessary to avoid loss of resource or facility that is irreplaceable or would be replaced at much greater expense later.	F
Replacement or repairs necessary to maintain present service, production, or user levels.	G
Replacement or repairs necessary to provide greater use or production levels where demand exceeds supply (at existing facilities).	I
Replacement or repairs necessary to provide greater use or production levels where demand exceeds supply (at new sites or facilities).	J

Class A -- Critical Projects

- (1) Projects critical to maintaining the statewide resources.
- (2) Management evaluations that address high priority species and information needs expressed in the Strategic Plan (e.g., chinook stocking evaluation, lake trout egg stocking, strain evaluations).
- (3) Statutory requirements; Great Lakes Fishery Commission agreements; Strategic Great Lakes Fish Management Plan.
- (4) Hatchery production projects, distribution projects.

Class B -- Important Projects

- (1) Management investigations that address key objectives in the Strategic Plan, produce important but not vital information, and are linked to an overall management purpose (includes population estimates, creel census, demand or harvest estimates, or survival estimates from stocking).
- (2) Projects with a high amount of local interest, cooperative projects with local organized clubs that address key problems in the Strategic Plan.
- (3) Basin Program Services, public relations, and equipment purchases.

Class C -- Moderately Important Projects

- (1) Routine surveys and assessments.

Class D -- Discretionary Projects

Note: These were general guidelines only. Each project was examined on its own merits and was put into a higher or lower category based on costs and expected program benefits. For example, a salmon or trout strain evaluation that fails to meet the minimum standards is not guaranteed a rating of A.

Because we were limited in our knowledge of future program needs, all projects were identified for tentative funding. Some projects listed within this plan may not be funded if higher priority or urgent program needs become apparent at a later date.

PROJECT DESCRIPTIONS AND COSTS

NORTHWEST DISTRICT

Facility Development

- (1) Bayfield Trout Hatchery Renovation Dates: 1984-86 Cost: \$71,000

This project will provide for repair of the well, drains, and doors of this hatchery (Table 2). The major expenditure (\$50,000) will be the renovation of the well in 1985. High pressure pipes and valves leading from the well are wearing out due to fine sand in the water. This hatchery produces all of the lake trout, splake, brook trout, and rainbow trout stocked in Lake Superior.

- (2) Brule River Trout Hatchery Renovation and Expansion Dates: 1983-88 Cost: \$62,000

This project will expand the capabilities of this facility to hatch and rear wild strains of brook, brown, and rainbow trout (Table 2). Expenditures in 1983 and 1984 will provide space to hatch 20,000 wild-domestic brown trout and to install "demand feeders" for rearing. Hatchery expansion will begin in 1985 with engineering plans. The facility will include space for 12 rearing tanks, 4-5 egg incubators, and fish food storage. When complete (1986), this hatchery will be able to hatch and rear through fry stage an additional 700,000 trout annually.

- (3) Osceola Trout Hatchery and Broodstock Station Renovation Dates: 1984-86 Cost: \$20,500

This project will renovate water delivery systems to hatching and rearing area (Table 2). Hatchery water manifolds will be elevated and water collection boxes replaced to increase egg hatching efficiency. This hatchery currently provides all of the rainbow trout eggs (approximately 1.5 million) used in the Lake Michigan stocking program.

- (4) Bayfield Assessment Boat and Equipment Dates: 1983-86 Cost: \$35,600

This project will purchase a boat, graph recorder, hydraulic scale, and bow thruster (Table 2). The new boat will be capable of lifting gill nets and trawling, to be used in conducting projects 1-3 of stocking program operations (Table 3). These activities include lake trout egg collection, stocking, and assessment. The graph recorder will be used to measure water depths, and the hydraulic scale will be used to accurately weigh fish while operating on Lake Superior. The bow thruster will improve steerage during net lifting to increase effectiveness and safety.

Table 2. Planned expenditure of Great Lakes Salmon and Trout Stamp revenues for stocking program facility development in the Northwest District, 1983-88.

Facility Development	Six-Year Total Cost	1983	1984	1985	1986	1987	1988	Project Ranking*
(1) Bayfield Trout Hatchery Renovation	\$71,000		\$4,500	\$56,500	\$10,000			G
(2) Brule River Trout Hatchery Renovation and Expansion	\$62,000	\$2,500	\$4,500	\$5,000	\$50,000			I
(3) Osceola Trout Hatchery and Broodstock Station Renovation	\$20,500		\$10,000	\$5,500	\$5,000			G, I
(4) Bayfield Assessment Boat and Equipment	\$35,600	\$32,000			\$3,600			**

*G = replacement or repairs necessary to maintain present service, production, or user levels;

I = replacement or repairs necessary to provide greater user or production levels where demand exceeds supply (at existing facilities).

**This is a capital equipment purchase (line 4200) integral to projects ranked elsewhere.

Operations (Activities)

- (1) Lake Trout Egg Stocking and Assessment Dates: 1983-88 Cost: \$ 7,349
- This project will stock 1 million lake trout eggs annually on inactive historical lake trout spawning reefs (Table 3). Its objective is to establish naturally reproducing lake trout populations. Fry and fingerling survival will be monitored during the spring and summer months.
- (2) Stock Lake Trout Yearlings and Evaluate Dates: 1984-88 Cost: \$89,804
- This project will stock 50,000 coded wire-tagged, hatchery-reared trout and 50,000 morpholine-imprinted, hatchery-reared lake trout on historical spawning reefs to compare movement and survival of various fingerling sizes and imprinting treatments (Table 3). The results of this project will refine lake trout stocking methodology to maximize survival and homing to spawning reefs.
- (3) Stocked and Native Lake Trout Spawning Assessment Dates: 1983-88 Cost: \$13,734
- This project will monitor spawner abundance, estimate mortality rates between spawning age classes, and describe the relationship between stocking location and spawning site selection of planted trout (Table 3). In addition, approximately 1.4 million fertilized eggs will be collected from Gull Island Shoal for egg stocking reefs and hatchery production of lake trout and splake.
- (4) Lake Superior Salmonid Creel Census Dates: 1983-88 Cost: \$266,756
- This project will estimate angler effort and catch of stocked salmon and trout from Lake Superior and its tributaries (Table 3). Data will be collected on movement, survival, growth, and reproduction of stocked salmonids. This project will provide essential tag return data to evaluate the stocking of chinook salmon, wild strain lake trout, splake, wild Nipigon brook trout, wild-domestic brown trout, and wild Pike Creek rainbow trout.
- (5) Collection of Wild Trout Eggs for Hatchery Production Dates: 1983-88 Cost: \$23,500
- This project will collect eggs and milt from rainbow (steelhead), brown, and brook trout in Lake Superior tributaries for hatchery production (Table 3). Approximately 300,000 fertilized eggs will be obtained by this activity.
- (6) Stock Trout and Salmon and Evaluate Dates: 1983-88 Cost: \$87,263
- This project will annually stock 500,000 salmonids and evaluate specific strains (Table 3). Included within this project is an evaluation of stocking 100,000 wild Nipigon brook trout, 50,000 wild-domestic hybrid brown trout, 100,000 wild Lake Superior rainbow trout, 200,000 splake trout, and 50,000 chinook salmon. This project will also assess the impacts, if any, of coho salmon on the natural production of rainbow trout in 8 Lake Superior tributaries.
- (7) Identification of Stream Trout Populations that Require Stocking Dates: 1983-88 Cost: \$78,505
- This project will assess juvenile production of anadromous trout within Lake Superior tributaries (Table 3). The amount of suitable stream habitat will be compared to numbers of juvenile trout present. Stocking will be initiated if inadequate numbers of trout occur in the available habitat. This project will provide the comprehensive data base required to implement an effective stocking program for anadromous salmonids.

Table 3. Planned expenditures of Great Lakes Salmon and Trout Stamp revenues for stocking program operations (activities) in the Northwest District, 1983-88.

Operation (Activity)	Six-Year Total Cost	1983	1984	1985	1986	1987	1988	Project Ranking*
(1) Lake Trout Egg Stocking and Assessment	\$7,349	\$720	\$2,970	\$824	\$882	\$944	\$1,009	A
(2) Stock Lake Trout Yearlings and Evaluate	\$89,804		\$9,994	\$57,809	\$6,795	\$7,320	\$7,886	B
(3) Stocked and Native Lake Trout Spawning Assessment	\$13,734	\$1,920	\$2,054	\$2,198	\$2,352	\$2,517	\$2,693	A, B
(4) Lake Superior Salmonid Creel Census	\$266,756	\$26,881	\$41,096	\$44,273	\$47,702	\$51,403	\$55,401	B
(5) Collection of Wild Trout Eggs for Hatchery Production	\$23,500	\$3,200	\$3,930	\$3,677	\$3,941	\$4,225	\$4,527	A
(6) Stock Trout and Salmon and Evaluate	\$87,263	\$4,400	\$14,396	\$15,410	\$16,496	\$17,658	\$18,903	A
(7) Identification of Stream Trout Populations That Require Stocking	\$78,505	\$10,700	\$11,554	\$12,478	\$13,478	\$14,561	\$15,734	B

*A = critical project; B = Important project.

SOUTHEAST DISTRICT

Facility Development

- (1) Kettle Moraine Springs Salmon and Trout Hatchery (see Table 4) Dates: 1983-87 Cost: \$685,900
- A. Coho Salmon Raceways - \$89,400. This project will convert the eastside field pond into concrete raceways. These raceways will use a separate water supply from the rest of the hatchery. As a result, this rearing area will be ideal for raising coho salmon, since the diseases associated with salmon will be isolated from the rest of the facility. Approximately 200,000-300,000 yearling coho salmon are expected to be produced.
 - B. Water Supply Development - \$68,000. This project will renovate the failing central water collection system and allow the hatchery to maintain current production levels. The project will also develop the water supply on the west side of the hatchery grounds. Water collected in this area will be used in the coho raceways and contribute to the production of 200,000-300,000 coho yearlings.
 - C. Stocking Truck - \$33,500. This project will purchase a heavy duty pickup truck, a "fifth wheel" type of trailer, and distribution tanks. In the past, a truck was borrowed from the Wild Rose Fish Hatchery; however, distribution schedules consistently overlapped. Development projects that increase salmon and trout production will increase demand for such a vehicle.
 - D. Salmon and Wild Trout Hatchery - \$143,000. This project will construct a building for hatching eggs that uses a separate water supply from the rest of the hatchery. Equipment will include egg hatching tanks, plumbing, and a freezer for storing fish food. This hatchery building will be able to accommodate 1 million coho salmon eggs and supply all of the coho fry for the Kettle Moraine Springs and Lake Mills hatcheries.

- E. Effluent Pond - \$20,000. This project will construct an effluent pond to treat hatchery water. As fish production increases at Kettle Moraine Springs, the increased volume of excretory waste will require more efficient treatment to maintain WPDES standards.
- F. Convert Trout Pond to Concrete Raceways - \$132,000. This project will convert the old earthen ponds in the east central area of the hatchery grounds to raceways. Currently, these ponds have poor water circulation, require continual maintenance, and are difficult to disinfect if disease contamination occurs. Converting the ponds to concrete raceways should eliminate these problems and contribute to the production of 80,000 trout.
- G. Purchase Land to Protect Water Supply - \$200,000. This project will purchase land adjacent to the hatchery grounds in the upper watershed area to protect current hatchery water supplies from diversion and contamination. Additional water supplies exist on this property which could be developed to increase production of wild strains of fish at Kettle Moraine Springs.

(2) Stocking Tank

Date: 1983

Cost: \$7,000

This project will purchase a small distribution tank for an Eagle Station truck used for stocking trout in Lake Michigan (Table 4). The tank currently being used is more than 10 years old, leaking, and in need of extensive repairs.

(3) Milwaukee Assessment Boat and Equipment

Date: 1983

Cost: \$14,350

This project will purchase a 20-ft all-welded aluminum work boat, trailer, motor, and accessory equipment (Table 4). This boat will be used to determine the movement, distribution, and abundance of trout and salmon (plus cool water species such as perch) near the shore in the Milwaukee harbor area. The boat will contribute to Operations Projects 3 and 5 listed in Table 5 and Project 2 in Table 7.

(4) Coho Salmon Release Ponds and Weir

Dates: 1985-87

Cost: \$125,000

This project will develop release ponds for the final rearing and imprinting phase for coho salmon stocking (Table 4). These ponds should enhance survival and homing of stocked salmon. In addition, this project will develop a facility for collecting coho salmon eggs and milt. In past years, fertilized eggs were obtained from Michigan. These eggs, however, suffered high mortality rates and were from adults that entered streams in November. This facility will allow hatchery personnel to establish quality control in the egg fertilization process and allow genetic selection for earlier (September) returning adults. Initially, the project will use information obtained from Project 6 in Table 5 and later contribute information to that project. This facility will be able to collect 1 million coho salmon eggs for rearing at the Kettle Moraine Springs and Lake Mills fish hatcheries. Matching federal monies from the Anadromous Fish Act are expected to contribute to the facility's construction.

Table 4. Planned expenditures of Great Lakes Salmon and Trout Stamp revenues for stocking program facility development in the Southeast District, 1983-88.

Facility Development	Six-Year Total Cost	1983	1984	1985	1986	1987	1988	Project Ranking*
(1) Kettle Moraine Springs Salmon and Trout Hatchery								
A. Coho Salmon Raceways	\$89,400	\$44,700	\$44,700					I
B. Water Supply Development	\$68,000	\$56,000	\$12,000					I
C. Stocking Truck	\$33,500	\$33,500						**
D. Salmon and Wild Trout Hatchery	\$143,000		\$70,000	\$63,000	\$10,000			J
E. Effluent Pond	\$20,000		\$20,000					B
F. Convert Trout Ponds to Concrete Raceways	\$132,000			\$60,000	\$72,000			G, I
G. Purchase Land to Protect Water Supply	\$200,000			\$50,000	\$50,000	\$100,000		F
Total	\$685,900	\$134,200	\$146,700	\$173,000	\$132,000	\$100,000		
(2) Stocking Tank	\$7,000	\$7,000						**
(3) Milwaukee Assessment Boat and Equipment	\$14,350	\$14,350						**
(4) Coho Salmon Release Ponds and Weir	\$125,000			\$25,000	\$50,000	\$50,000		C, J

*B = required by law; C = necessary to maintain eligibility for federal funding; F = preventive action necessary to avoid loss of a resource or facility that is irreplaceable or would be replaced at much greater expense later; I = replacement or repairs necessary to provide greater user or production levels where demand exceeds supply (at existing facilities); J = replacement or repairs necessary to provide greater user or production levels where demand exceeds supply (at new sites or facilities).

**This is a capital equipment purchase (line 4200) integral to projects ranked elsewhere.

Operations (Activities)

(1) Lake Michigan Salmonid Creel Census Dates: 1983-88 Cost: \$289,028

This project will evaluate the stocking of trout and salmon in terms of return to anglers (Table 5). Total harvest, total effort, catch per effort, species composition of catch, and geographical distribution of catch will be estimated in the Lake Michigan waters from Sheboygan County south. This project provides essential feedback concerning the current stocking program and may suggest program alterations to maximize stocking effectiveness. It will provide the stocking return data necessary for the successful completion of Operations Project 5 in Table 5 and Projects 2 and 4-9 in Table 7.

(2) Trout Stocking Costs Dates: 1983-88 Cost: \$15,431

This project will provide for costs incurred by transporting trout to Wisconsin from adjacent states (Table 5). Trout are available from these states for stocking in Wisconsin due to overproduction within their hatchery systems. In 1982, Wisconsin obtained over 100,000 trout for stocking in Lake Michigan waters from such sources.

(3) Salmonid Collection for PCB Analysis Dates: 1983-88 Cost: \$9,259

This project will provide salmon and trout collections for routine monitoring of PCB concentrations (Table 5). These data will be used to maintain public health advisories concerning the consumption of stocked salmon and trout in Lake Michigan.

(4) Kettle Moraine Springs Salmon and Trout Hatchery Operations Dates: 1984-88 Cost: \$232,716

This project will provide the necessary materials and manpower to fully utilize the expanded fish production potential gained through the completion of the hatchery development program (Tables 4 and 5). All associated production costs, from fish food to miscellaneous system maintenance supplies, are covered within this budget.

(5) Stock Lake Trout and Evaluate

Dates: 1984-88

Cost: \$271,428

This project will stock approximately 500,000 lake trout annually and evaluate survival through spawning in Lake Michigan (Table 5). Stocking and assessment activities will take place on Wind Point Shoal, Black Can Reef, Northeast Reef, and Sheboygan Reef. This project will evaluate the Domestic (Superior), Green Lake, Seneca Lake, and Jenny Lake trout strains and identify which should be stocked. Movement and association to stocking location of planted lake trout will also be determined.

(6) Coho Salmon Broodstock Selection

Dates: 1984-88

Cost: \$35,227

This project will collect fertilized coho salmon eggs and determine spawning run timing in the Sheboygan River (Table 5). In addition, this project will obtain milt from early running coho populations in Alaska to hybridize with Lake Michigan coho eggs. The development of coho salmon strains that return to stocking locations in late August and September will enhance the harvest of these fish. Currently, coho salmon return to Wisconsin streams in late October and November when angling activities are minimal. Assessment activities will compare timing of spawning between pure Lake Michigan and Lake Michigan-Alaska hybrid strains. The hybrid strains will be produced for 3 years. This operations activity will provide 1 million fertilized coho salmon eggs for hatching and rearing at the Kettle Moraine Springs and Lake Mills hatcheries.

Table 5. Planned expenditures of Great Lakes Salmon and Trout Stamp revenues for stocking program operations (activities) in the Southeast District, 1983-88.

Operation (Activity)	Six-Year Total Cost	1983	1984	1985	1986	1987	1988	Project Ranking*
(1) Lake Michigan Salmonid Creel Census	\$289,028	\$39,800	\$42,816	\$46,068	\$49,572	\$55,350	\$57,422	B
(2) Trout Stocking Costs	\$15,431	\$2,000	\$2,200	\$2,420	\$2,662	\$2,928	\$3,221	A
(3) Salmonid Collection for PCB Analysis	\$9,259	\$1,200	\$1,320	\$1,452	\$1,597	\$1,757	\$1,933	A
(4) Kettle Moraine Springs Salmon and Trout Hatchery Operations	\$232,716		\$31,365	\$33,920	\$51,521	\$55,664	\$63,012	A
(5) Stock Lake Trout and Evaluate	\$271,428		\$46,227	\$49,937	\$53,952	\$58,300	\$63,012	B
(6) Coho Salmon Broodstock Selection	\$35,227		\$4,122	\$13,614	\$6,133	\$6,699	\$4,659	A

*A = critical project; B = important project.

LAKE MICHIGAN DISTRICT

Facility Development

(1) Strawberry Creek Salmon Rearing
and Weir Pond Renovation

Dates: 1983-88

Cost: \$104,140

This project will reconstruct the rearing and weir pond on Strawberry Creek near Sturgeon Bay (Table 6). In 1983, the pond will be redredged and banks stabilized. Electrical service will also be added to the facility. In 1984, development will include a water control structure for the creek, well, and fence. Costs from 1985-88 are payments for lease and taxes. At this facility, approximately 4 million chinook fertilized eggs are collected annually. These eggs provide all of the chinook salmon stocked in Lakes Michigan and Superior.

(2) Manitowoc Salmon Rearing Pond Renovation

Date: 1984

Cost: \$6,500

This project will dredge the outlet area adjacent to the Manitowoc salmon and trout rearing pond (Table 6). Improvement of the outlet will aid in the movement of salmon and trout juveniles from the pond to the Manitowoc River. This pond annually holds 250,000 chinook salmon for final rearing and imprinting.

(3) Oconto River Trout Fishery Development

Dates: 1985-88

Cost: \$375,000

This project will construct a combination egg-collection and fish-ladder facility adjacent to the Stiles Dam on the Oconto River (Table 6). Engineering plans will be developed in 1985 for the facility. Construction of a rearing and weir pond, and fish ladder will occur from 1986-88. The rearing and weir pond will be used for collecting rainbow trout (steelhead) and possibly Atlantic salmon eggs from spawning adults. Approximately 1.5 million fertilized eggs are expected to be collected from this facility in the autumn and spring. Steelhead eggs will be of wild summer- and spring-run strains. The eggs will be used for hatchery production of steelhead for stocking the Oconto River, Stoney Creek, Kewaunee River, Manitowoc River, Pigeon River, and Root River. The pond will also be used as a final rearing and imprinting site for the steelhead and Atlantic salmon just prior to stocking. This project will also construct a fish ladder around the Stiles Dam to allow spawning steelhead adults to pass to upstream areas as far as Oconto Falls on the Oconto River. This ladder will also allow spawning adults access to Coopman, Dump, Brehmer, and Splitter creeks where natural reproduction of the steelhead trout is expected. The fish ladder will create a trophy trout (steelhead) fishery in the Machickanee Flowage (2.5 miles), Oconto River (additional 2.5 miles), and tributary streams (2.5 miles) from September through May. Matching federal monies from the Anadromous Fish Act are expected to contribute to the construction of this facility. Project 8 in Table 7 will provide the operations activity to utilize and assess this facility.

Table 6. Planned expenditures of Great Lakes Salmon and Trout Stamp revenues for stocking program facility development in the Lake Michigan District, 1983-88.

Facility Development	Six-Year Total Cost	1983	1984	1985	1986	1987	1988	Project Ranking*
(1) Strawberry Creek Salmon Rearing and Weir Pond Renovation	\$104,140	\$54,140	\$44,000	\$1,500	\$1,500	\$1,500	\$1,500	F, G
(2) Manitowoc Salmon Rearing Pond Renovation	\$ 6,500		\$6,500					F, G
(3) Oconto River Trout Fishery Development	\$365,000			\$5,000	\$50,000	\$100,000	\$210,000	C, J

*C = necessary to maintain eligibility for federal funding; F = preventive action necessary to avoid loss of a resource or facility that is irreplaceable or would be replaced at much greater expense later; G = replacement or repairs necessary to maintain present service, production, or user levels; J = replacement or repairs necessary to provide greater user or production levels where demand exceeds supply (at new sites or facilities).

Operations (Activities)

(1) Salmon Pond Rearing

Dates: 1983-88

Cost: \$73,326

This project will include all activities necessary to operate the chinook salmon ponds along the Lake Michigan shoreline in the spring and the spawn taking facility at Strawberry Creek in the fall (Table 7). This project includes costs for pond preparatory maintenance, fingerling rearing, egg taking, guarding the Strawberry Pond, and collecting biological data on returning adults. The R/V Barney Devine will operate 50 hours to monitor returning adult salmon. This project will collect approximately 4 million chinook salmon eggs and provide final rearing and imprinting for 800,000 salmon.

(2) Chinook Salmon Stocking Evaluation

Dates: 1983-88

Cost: \$95,522

This project will stock 80,000 coded wire-tagged chinook salmon each year from 1982-84 (Table 7). One lot each of 20,000 uniquely marked salmon will be stocked each year at Marinette, Strawberry Creek, Sheboygan, and Racine. Tag returns are expected through 1987 with project completion in 1988.

This project will identify stocking locations that maximize the survival to harvest of stocked chinook salmon in Lake Michigan. In addition, the age composition, growth pattern, and catch distribution (seasonal and geographical) will be described. Coded wire tags will be implanted in fingerling salmon at the Wild Rose Hatchery. Tags will be returned through the regular contact creel census and voluntary returns through the Great Lakes sport fishing clubs. Chinook salmon currently comprise 40% of the Lake Michigan salmonid sport catch.

(3) Lake Michigan Salmonid Creel Census

Dates: 1983-88

Cost: \$289,028

This project will evaluate the stocking of trout and salmon in terms of return to anglers (Table 7). Total harvest, total effort, catch per effort, species composition of catch, and geographical distribution of catch will be estimated in the waters from Manitowoc County north. This project provides essential feedback concerning the current stocking program and may suggest program alterations to maximize stocking effectiveness. This program will provide the stocking return data necessary for the successful completion of Operations Projects 5 in Table 5 and Projects 2 and 4-9 in Table 7.

(4) Stock Brook Trout Strains and Evaluate

Dates: 1983-86

Cost: \$30,532

This project will stock 15,000 wild Nipigon and 15,000 domestic strain brook trout in Lake Michigan and compare their survival to harvest (Table 7). Each strain will be given an identifying mark prior to stocking. Growth, survival, food habits, distribution, movement, and angler catch will be monitored for each strain through 1986. This study will identify the best brook trout strain for stocking in Lake Michigan.

(5) Stock Lake Trout and Evaluate

Dates: 1983-88

Cost: \$67,252

This project will stock 100,000-200,000 lake trout of various strains on historic spawning reefs in northern Lake Michigan (Table 7). Survival, movement, growth rates, and reproduction will be compared among strains. Assessment data will be obtained through the monitoring of commercial and sport fisheries and by assessment fishing aboard the Department's research vessel. This project will contribute to the reestablishment of lake trout and identify lake trout strains that are best for stocking.

(6) Stock Splake and Evaluate

Dates: 1984-88

Cost: \$15,934

This project will stock four lots of 10,000 splake in Green Bay near Marinette (Table 7). Two lots of yearlings and two lots of fingerlings will be planted. F₁ crosses will be made using female Lake Michigan lake trout and hatchery or wild Lake Nipigon male brook trout. Evaluation will be made through the regular creel census (Project 3, Table 7) and experimental gear. The goal of this project is to create a winter fishery for splake in the Marinette area. A similar fishery has been developed in Lake Superior's Chequamegon Bay.

(7) Stock Rainbow Trout Strains and Evaluate

Dates: 1984-88

Cost: \$52,676

This project will stock 10,000 Shasta and 10,000 December spawning rainbow trout in the Kewaunee River and evaluate their return to anglers (Table 7). The two strains will be floy tagged prior to stocking. Tags will be returned via the Lake Michigan creel census, voluntary angler returns, assessment fishing, and electrofishing surveys. This project will identify which strain is most suitable for stocking in Lake Michigan.

(8) Oconto River Trout Fishery Spawn Collection and Assessment

Dates: 1985-88

Cost: \$59,355

This project will initially evaluate the stocking of 25,000 summer-run and 25,000 spring-run rainbow trout (steelhead) in the Oconto River (Table 7). In addition, this project will collect up to 1.5 million fertilized steelhead eggs for hatchery production and stocking in Lake Michigan. Egg collection and assessment activities will be conducted by electrofishing the Oconto River. Upon completion of the rearing and weir pond near the Stiles Dam (Project 3, Table 6), this project will operate this facility. If Atlantic salmon are available for stocking, this project will evaluate stocking success and provide collections of salmon eggs. The goal of this project and Project 3 in Table 6 is to provide a trophy trout (steelhead) fishery from September-May in this river.

(9) Salmon and Trout Sterilization
Stocking and Assessment

Dates: 1986-88

Cost: \$73,840

This project will stock 20,000 sterile and 20,000 normal chinook salmon at Strawberry Creek and 20,000 sterile and 20,000 normal brown trout at Marquette (Table 7). These stockings will be made in 1986, 1987, and 1988. Assessment of the plants will continue through 1992. Sterile fish will be produced by treating salmon and trout at early life stages with methyltestosterone in the hatchery. This treatment produces sterile fish that do not mature and die but continue to gain weight beyond normal maturity dates. Prior to stocking, the brown trout and chinook salmon in this study will have coded wire tags implanted in their snouts. Tag returns will be obtained through the creel census, voluntary angler returns, and assessment fishing. This project will determine whether methyltestosterone-treated salmon and trout will grow to unusually large sizes (35+ pounds).

Table 7. Planned expenditure of Great Lakes Salmon and Trout Stamp revenues for stocking program operations (activities) in the Lake Michigan District, 1983-88.

Operation (Activity)	Six-Year Total Cost	1983	1984	1985	1986	1987	1988	Project Ranking*
(1) Salmon Pond Rearing	\$73,326	\$10,100	\$10,852	\$11,671	\$12,565	\$13,538	\$14,600	A
(2) Chinook Salmon Stocking Evaluation	\$95,522	\$47,990	\$14,241	\$8,335	\$8,798	\$9,304	\$6,854	A
(3) Lake Michigan Salmonid Creek Census	\$289,028	\$39,800	\$42,861	\$46,068	\$49,572	\$53,350	\$57,422	B
(4) Stock Brook Trout Strains and Evaluate	\$32,952	\$1,000	\$9,879	\$10,631	\$11,442			A
(5) Stock Lake Trout and Evaluate	\$67,252	\$1,500	\$11,332	\$12,175	\$13,081	\$14,057	\$15,107	B
(6) Stock Splake and Evaluate	\$15,934		\$2,610	\$2,871	\$3,158	\$3,474	\$3,821	B
(7) Stock Rainbow Trout Strains and Evaluate	\$52,676		\$8,852	\$9,621	\$10,460	\$11,373	\$12,370	B
(8) Oconto River Trout Fishery Spawn Collection and Assessment	\$59,355			\$13,187	\$14,231	\$15,358	\$16,579	B
(9) Salmon and Trout Sterilization and Assessment	\$73,840				\$19,443	\$26,224	\$28,173	B

*A = critical project; B = important project.

SOUTHERN DISTRICT

Facility Development

(1) Nevin Trout Hatchery Renovation

Date: 1985

Cost: \$55,000

This project will dredge the effluent settling basin and rearing pond (Table 8). Dredging of the effluent basin is required to permit improved effluent handling and maintain WPDES standards, while the rearing pond requires dredging to maintain its current productive capacity. In addition, minor construction will occur on Catfish Pond to increase production by 50,000 brown trout. This hatchery currently produces 70,000 brown trout and 180,000 rainbow trout annually for stocking in Lake Michigan.

(2) Westfield Salmon Rearing Station Renovation

Date: 1985

Cost: \$5,000

This project will renovate the water recirculating system used at this rearing station (Table 8). This station rears approximately 1 million chinook salmon for stocking in Lake Michigan.

Table 8. Planned expenditures of Great Lakes Salmon and Trout Stamp revenues for stocking program facility development in the Southern District, 1983-88.

Facility Development	Six-Year Total Cost	1983	1984	1985	1986	1987	1988	Project Ranking*
Southern District								
(1) Nevin Trout Hatchery Renovation	\$55,000			\$55,000				B, G
(2) Westfield Salmon Rearing Station Renovation	\$5,000			\$5,000				G

* B = required by law; G = replacement or repairs necessary to maintain present service, production, or user levels.

Operations (Activities)

(1) Lake Mills Salmon Hatchery Operations

Dates: 1983-88

Cost: \$470,564

This project will provide expenses required to operate the Lake Mills National Fish Hatchery to rear 300,000 yearling coho salmon for stocking in Lake Michigan (Table 9). These expenses include manpower, utilities, supplies, and fish food. The federal government is closing this facility in March 1983 and has offered the hatchery for state use. Coho stocking in Lake Michigan was reduced from 500,000 in 1978 to 216,000 in 1982 due to loss of propagation funds from the Anadromous Fish Act. Coho production from the Lake Mills and Kettle Moraine Springs hatcheries will allow coho stocking to return to or slightly exceed the former level of 500,000 yearlings.

Table 9. Planned expenditures of Great Lakes Salmon and Trout Stamp revenues for stocking program operations (activities) in the Southern District, 1983-88.

Operation (Activity)	Six-Year Total Cost	1983	1984	1985	1986	1987	1988	Project Ranking*
Southern District								
(1) Lake Mills Salmon Hatchery Operations	\$470,564	\$22,044	\$75,724	\$82,371	\$89,192	\$96,597	\$104,636	A

*A = critical project.

NORTH CENTRAL DISTRICT

Facility Development

- (1) Langlade Trout Rearing Station Renovation Dates: 1984-85 Cost: \$85,800

This project will construct 3 new ponds, renovate the rearing building, and explore the groundwater potential on the east side (Table 10). Two of the ponds will replace the north battery of raceways which are deteriorating. Renovation of the rearing house will increase the winter carrying capacity at Langlade. This project will develop facilities to produce an additional 100,000 yearlings and 50,000 fingerling trout. The additional production will be used to rear summer- and spring-run rainbow trout (steelhead) for stocking in the Oconto River, Stoney Creek, and Kewaunee River.

- (2) Thunder River Trout Rearing Station Renovation Date: 1985 Cost: \$23,000

This project will rebuild rearing pond banks, stabilize raceway floors, extend sub-surface drains, and lay pipeline to a pollution control pond (Table 10). In addition, a 500-gal/min pump (pollution control) and a 16-hp tractor will be purchased. This project will allow Thunder River to continue to produce 100,000-120,000 brown trout for stocking in Lake Michigan. This station may also be used for rearing Atlantic salmon since it has a warmer water supply.

Table 10. Planned expenditures of Great Lakes Salmon and Trout Stamp revenues for stocking program facility development and operations (activities) in the North Central District, 1983-88.

Facility Development	Six-Year Total Cost	1983	1984	1985	1986	1987	1988	Project Ranking*
(1) Langlade Trout Rearing Station Renovation	\$85,800		\$39,800	\$46,000				G, 1
(2) Thunder River Trout Rearing Station Renovation	\$23,000			\$23,000				B, 6

* B = required by law; G = replacement or repairs necessary to maintain present service, production, or user levels; 1 = replacement or repairs necessary to provide greater user or production levels where demand exceeds supply (at existing facilities).

BUREAU OF FISH MANAGEMENT

Operations (Activities)

- (1) Salmon and Trout Contaminant Analysis Date: 1983 Cost: \$24,000

This project will identify the relationship between contaminant levels in parents and progeny of chinook salmon and lake trout (Table 11). These data will be used to estimate the quantities of fertilized eggs required to produce the desired stocking quotas. Toxaphene has been recently identified as a contaminant of adult fish and eggs and is known to be extremely toxic to fish. This project will include analyses for toxaphene. In addition, data from this project will be used to update health advisories concerning the human consumption of stocked Lake Michigan fish.

- (2) Stocking Data Tabulation Dates: 1983-84 Cost: \$8,212

This project will tabulate salmon and trout stocked in Lakes Superior and Michigan by size, strain, date, and location (Table 11). These data will be used to monitor stocking changes that occur due to the Salmon and Trout Stamp projects and to comply with Great Lakes Fishery Commission requests for stocking data.

Table 11. Planned expenditures of Great Lakes Salmon and Trout Stamp revenues for stocking program operations (activities) in the Bureau of Fish Management, 1983-88.

Operation (Activity)	Six-Year Total Cost	1983	1984	1985	1986	1987	1988	Project Ranking*
Bureau of Fish Management								
(1) Salmon and Trout Contaminant Analysis	\$24,000	\$24,000						A
(2) Stocking Data Tabulation	\$8,212	\$5,404	\$2,808					C

*A = critical project; C = moderately important project.

DISTRICT COMPARISONS

Expenditures within each district except the Lake Michigan District will be highest in 1985 or 1986 (Table 12). This peak in expenditures is primarily due to development projects within the hatchery system serving the Great Lakes. Project costs in the Lake Michigan District steadily increase until 1988. This increase is due to the start of major projects on the Oconto River and stocking sterilized salmonids (Table 7).

The Southeast District will expend the greatest amount (39%) of salmon stamp revenue over the 6-year period (Table 12). The least expenditures will occur in the Bureau of Fish Management (0.7%) and the North Central District (2.5%). Development costs will be highest in the Southeast District due to the Kettle Moraine Springs Fish Hatchery projects (Table 5). Operation costs will be similar between the Southeast and Lake Michigan districts.

LAKE COMPARISONS

Project costs were categorized by the Great Lake that will benefit with project completion (Table 13). Several projects, such as the Bayfield and Osceola trout hatchery renovations, will provide benefits to fish management programs in both Lake Superior and Lake Michigan. Projects with combined lake benefits totaled approximately \$300,000 and comprised 7% of the total planned expenditures. Project costs that provide benefits only to management programs in Lake Superior will be approximately \$640,000 and comprise 15% of the expenditures. All unique Lake Superior project expenditures will occur within the Northwest District. Expenditures for Lake Michigan projects will be approximately \$3.4 million, or 78% of the total.

Table 12. Total planned expenditures of Great Lakes Salmon and Trout Stamp revenues by District for the stocking program, 1983-88.

District	Six-Year Total Cost	1983	1984	1985	1986	1987	1988
Northwest District							
Development	\$189,100	\$34,500	\$19,000	\$67,000	\$68,600		
Operations	\$566,911	\$47,821	\$85,994	\$136,669	\$91,646	\$98,628	\$106,153
Total	\$756,011	\$82,321	\$104,994	\$203,669	\$160,246	\$98,628	\$106,153
Southeast District							
Development	\$832,250	\$155,550	\$146,700	\$198,000	\$182,000	\$150,000	
Operations	\$853,089	\$43,000	\$128,050	\$147,411	\$165,437	\$178,698	\$190,493
Total	\$1,685,339	\$198,550	\$274,750	\$345,411	\$347,437	\$328,698	\$190,493
Lake Michigan District							
Development	\$475,640	\$54,140	\$50,500	\$6,500	\$51,500	\$101,500	\$211,500
Operations	\$759,885	\$100,390	\$100,582	\$114,559	\$142,750	\$146,678	\$154,926
Total	\$1,235,525	\$154,530	\$151,082	\$121,059	\$194,250	\$248,178	\$366,426
Southern District							
Development	\$60,000			\$60,000			
Operations	\$470,564	\$22,044	\$75,724	\$82,371	\$89,192	\$96,597	\$104,636
Total	\$530,564	\$22,044	\$75,724	\$142,371	\$89,192	\$96,597	\$104,636
North Central District							
Development - Total	\$108,800		\$39,800	\$69,000			
Bureau of Fish Management							
Operations - Total	\$32,212	\$29,404	\$2,808				
Grand Total	\$4,348,451	\$486,849	\$649,158	\$881,510	\$791,125	\$772,101	\$767,708

Table 13. Planned project expenditures of Salmon and Trout Stamp revenues categorized by Great Lake benefited, 1983-88.

District	Project Expenditures			
	Lake Superior	Lake Michigan	Lake Superior and Lake Michigan	Total
Northwest	\$641,011		\$115,000	\$756,011
Southeast		\$1,685,339		\$1,685,339
Lake Michigan		\$1,058,059	\$177,466	\$1,235,525
Southern		\$530,564		\$530,564
North Central		\$108,800		\$108,800
Bureau of Fish Management		\$24,000	\$8,212	\$32,212
Total	\$641,011	\$3,406,762	\$300,678	\$4,348,451
Percent	15%	78%	7%	

SUMMARY

The projects recommended for funding by Salmon and Trout Stamp revenues reflect the Great Lakes sport fishery program's emphasis for the future. The stocking of special strains of salmon and trout is expected to play an increasingly greater role in the sport fishery. Strains for stocking will be selected based on their capabilities for surviving in the Great Lakes and accessibility to sport anglers. Most strains to be used in the stocking program are expected to be developed from wild populations. Such populations should contain the genetic capabilities for survival in the wild. Initial strain selection for hatchery propagation will be based on the performance in the wild of experimental plants. Creel census activities will remain the primary project to determine the return to the angler of specific stocked strains. The stocking and evaluation of these plants will represent 17 of 25 operations (activities) projects and 85% of the operations budget.

The propagation of wild strains presents unique fish cultural problems due to the presence of diseases that do not occur in domestic salmonids. This disease problem within the hatchery system can be easily controlled by proper hatchery design. The strategy for disease control involves isolation of specific lots of fish through the development of separate water supplies. This design typifies the development projects identified for Kettle Moraine Springs Fish Hatchery. Several other hatcheries (Bayfield, Brule, Langlade) have been identified as ideal hatcheries for the propagation of special strains of salmonids and have renovation development projects planned. Facilities to collect eggs from wild populations have also been planned which will provide fertilized eggs for hatchery rearing. Facility development projects that pertain to the rearing of unique strains of salmonids represent 11 of 15 projects and 95% of the development budget.

REVENUE VS. EXPENDITURES

Annual sales of Salmon and Trout Stamps were projected to provide a 6-year total revenue of \$4,360,655 (Table 14). Total planned expenditures from 1983-88 were estimated as \$4,348,451. These expenditures leave a balance of \$12,234 in 1988. Total expenditures will rise from 1983 to a peak in 1985 and then decline to relatively constant levels between 1986 and 1988. Development expenditures will be \$1,665,790 and comprise 38% of the total.

Five additional projects have been identified for funding if annual sales of stamps markedly increase from projected levels, or inflation and salary rate increases are less than those stated in the methods section. These are:

- (1) Pond Construction on New Hatchery Grounds
at Kettle Moraine Springs Fish Hatchery

Cost: \$90,000

This project will develop water supplies and construct rearing ponds on the land to be purchased (Project 1, Table 4) adjacent to the present hatchery grounds. These ponds would be used to rear additional salmon and trout for Lake Michigan.

- (2) Mobile Hatchery Tagging Trailer

Cost: \$30,000

This project will purchase a trailer to contain coded wire tagging equipment for marking salmon and trout fingerlings and yearlings in hatcheries. The tagging machines previously purchased in past projects will be installed in the trailer. This trailer will be moved to hatcheries where salmon and trout require marking. Use of this trailer will prevent the need to purchase coded wire tagging equipment for each hatchery.

- (3) Fish Creek Sediment Traps

Cost: \$60,000

This project will evaluate the potential of instream sediment basins to remove the sand load from Lake Superior tributaries. Sediment basins will be developed on Fish Creek to assess potential beneficial effects, such as increased invertebrate production and fish spawning habitat. If stream carrying capacities can be increased by this method, then increased numbers of trout could be successfully stocked in such areas.

- (4) Oconto River Fishery Development

Cost: \$600,000

This project will construct 2 additional fish ladders at the Scott Paper Mill dam and the WEPCO dam in Oconto Falls. These ladders will provide passage of Lake Michigan rainbow trout in the Oconto River to as far as Chute Pond (approximately 40 miles upstream from Oconto Falls). This will allow expansion of the stocking program in this river. Federal aid may share expenses in this project.

(5) Food Habits of Stocked Trout

Cost: \$50,000

This project will examine the dietary habits of stocked trout and salmon in Lake Michigan to determine if the food habits of salmonids are being altered by a changing forage base. The project will identify the best salmon and trout species to stock to utilize the forage present.

Table 14. Balance sheet for Great Lakes Salmon and Trout Stamp revenues and expenditures, 1983-88.

	Calendar Year	1982	1983	1984	1985	1986	1987
Source	Fiscal Year	1983	1984	1985	1986	1987	1988
Revenue							
Annual Sales		\$700,000	\$710,500	\$721,157	\$731,975	\$742,954	\$754,099
Balance (from previous year)			\$213,151	\$274,493	\$114,140	\$54,990	\$25,843
Total		\$700,000	\$923,651	\$995,650	\$846,115	\$797,944	\$779,942
Expenditures							
Development		\$244,190	\$256,000	\$400,500	\$302,100	\$251,500	\$211,500
Operations		\$242,659	\$393,158	\$481,010	\$489,025	\$520,601	\$556,208
Total		\$486,849	\$649,158	\$881,510	\$791,125	\$772,101	\$767,708
Balance		\$213,151	\$274,493	\$114,140	\$54,990	\$25,843	\$12,234

APPENDIX: GUIDELINES FOR THE USE OF GREAT LAKES SALMON AND TROUT STAMP REVENUES

INTRODUCTION

Beginning in 1982, licensed Wisconsin anglers were required to purchase a Great Lakes Salmon and Trout Stamp for \$3.25 in order to fish salmon and trout in Great Lakes outlying waters. The revenues generated by the stamp are to be used to supplement and enhance the Great Lakes stocking program. This document presents guidelines for the Department of Natural Resources to use monies generated by the sale of these stamps.

GUIDELINES

Wisconsin state statute 29.15(5) states that "the Department shall expend the receipts from the sale of Great Lakes trout and salmon stamps to supplement and enhance the existing trout and salmon rearing and stocking program for outlying waters and to administer this section." These statutes clearly define that expenditures are (1) species limited to salmon and trout only, (2) geographically limited to the Wisconsin waters of Lakes Michigan and Superior and their tributaries, and (3) program limited to the rearing and stocking program. Projects funded by stamp monies must meet these three requirements or be related to the administration of these monies.

Species Requirement

Salmon and trout stamp dollars may only be used for projects that pertain to salmonid species. These species include Pacific salmon (e.g., coho and chinook), trout (e.g., rainbow and brown), and chars (e.g., brook, splake, and lake trout). Stamp money may not be used for projects specifically directed toward warm and/or cool water fishes such as percids, esocids, and centrarchids.

Geographical Requirement

Projects that use stamp revenues must also be geographically related to the Great Lakes watershed. Specifically, the geographical scope of these projects may include tributaries accessible to Great Lakes salmon and trout as well as Lakes Michigan and Superior themselves. Stamp money, however, is excluded from use in projects that pertain to trout waters other than the Great Lakes (e.g., Great Lakes tributaries not accessible to Great Lakes salmon and trout, Waupaca County trout streams).

Program Requirement

Projects funded by salmon and trout stamp money must also relate specifically to the stocking program for the Great Lakes. This program includes a variety of activities and physical facilities which require equipment, services, and manpower.

Activities within the stocking program may be categorized as propagation, evaluation, or experimental. For example, propagation activities include acquisition of fertilized eggs, egg incubation, fish rearing (fry, fingerlings, broodstock, etc.), and transportation of fish to planting sites. Hatchery operational costs such as electricity, gasoline, manpower, fish food, buckets, and waders are included within propagation activities.

Evaluation activities within the stocking program include obtaining information about the return to the angler of hatchery fish and using this information for planning purposes. These activities provide the "quality control" for the stocking program. Examples of evaluation and monitoring activities include lakewide creel censuses, species and/or strain evaluations (tagging or marking studies), development of management plans (annual stocking plans, species plans, long-term plans, etc.), and annual propagation planning.

Experimental activities of the stocking program involve the use and evaluation of alternative methods for conducting propagation and evaluation activities. Projects within this category include evaluation of automatic fry feeders, innovative hatchery incubators, alternative fish foods, artificial reef substrates for egg incubation, new creel census methods, new fish marking methods, and gamete preservation.

The physical facilities of the stocking program are the equipment, buildings, and land required to support the stocking program activities. Specifically, these facilities include raceways, rearing ponds, buildings, hatchery grounds, generators, pumps, water supply systems, vehicles, aerators, automatic fish feeders, land, engineering plans, and incubators. Salmon and Trout Stamp revenue may be used for maintenance, repair, or purchase of these facilities in order to maintain or expand the stocking program.

SUMMARY

Projects to be funded by revenues from the Great Lakes Salmon and Trout Stamp must pertain to the stocking program of salmon and trout in the Great Lakes watershed of Wisconsin. The stocking program includes a variety of activities and physical facilities which require equipment, services, and manpower. An outline summary of the guidelines for revenue expenditures is provided below.

I. Expenditure Requirements - All Great Lakes Salmon and Trout Stamp projects must meet each requirement.

A. Species - Projects must pertain to salmon and trout.

B. Geographical - Projects must pertain to the Great Lakes watershed.

C. Program - Projects must pertain to the stocking program.

II. Species Definition - Projects must relate to one or more of genera listed.

A. Oncorhynchus - Pacific salmon (i.e., coho and chinook salmon).

B. Salmo - Trout (i.e., rainbow and brown trout).

C. Salvelinus - Char (i.e., brook and lake trout).

III. Geographical Definition - Projects must relate to one or more of the waters listed.

A. Lake Michigan.

B. Lake Superior.

C. Tributaries or portions thereof accessible to Great Lakes trout and salmon.

IV. Program Definition - Projects must relate to one or more aspects of the stocking program.

A. Stocking Program

1. Activities

- a. propagation
- b. evaluation
- c. experimental

2. Physical Facilities

- a. equipment
- b. buildings
- c. land

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Word Processor - Diane Peters and Dixie Wipperfurth

0756D